Medical Coverage Policy | External Counterpulsation (ECP)

EFFECTIVE DATE: 12/01/2014
POLICY LAST UPDATED: 11/04/2014

OVERVIEW

This policy documents coverage guidelines for BlueCHiP for Medicare and Commercial Products for External Counterpulsation. Enhanced external counterpulsation (EECP) is a noninvasive treatment used to augment diastolic pressure; decrease left ventricular afterload, and increase venous return. It has been studied primarily as a treatment for patients with refractory angina and heart failure, as well as for other indications such as erectile dysfunction and ischemic stroke.

PRIOR AUTHORIZATION

BlueCHiP for Medicare

Prior authorization is required for BlueCHiP for Medicare only and obtained via the online tool for participating providers. See the Related Policies section.

Commercial Products

Not Applicable

POLICY STATEMENT

BlueCHiP for Medicare

ECP is considered medically necessary for BlueCHiP for Medicare members with preauthorization for the specific conditions listed in the criteria.

> **Note:** Medicare policy is developed separately from BCBSRI policy. Medicare policy incorporates consideration of governmental regulations from CMS (Centers for Medicare and Medicaid Services), such as national coverage determinations or local coverage determinations. In addition to benefit differences, CMS may reach different conclusions regarding the scientific evidence than does BCBSRI. Medicare and BCBSRI policies may differ. However, BlueCHiP for Medicare members must be offered, at least, the same services as Medicare offers.

Commercial

Enhanced external counterpulsation is not medically necessary for all indications, including but not limited to, treatment of chronic stable angina pectoris, heart failure, erectile dysfunction, or ischemic stroke as there is insufficient peer-reviewed scientific literature to demonstrate that the procedure is effective.

MEDICAL CRITERIA

BlueCHiP for Medicare

ECP is medically necessary for members who have been diagnosed with disabling angina (Class III or Class IV, Canadian Cardiovascular Society Classification or equivalent classification) who, in the opinion of a cardiologist or cardiothoracic surgeon, are not readily amenable to surgical intervention, such as percutaneous transluminal coronary angioplasty (PTCA) or cardiac bypass, and

1. Their condition is inoperable, or at high risk of operative complications or post-operative failure;
2. Their coronary anatomy is not readily amenable to such procedures; or

3. They have co-morbid states which create excessive risk.

BACKGROUND

Enhanced external counterpulsation (ECP) is a noninvasive outpatient therapy used for the treatment of coronary artery disease refractory to standard medical and/or surgical therapy. A full course of therapy usually consists of 35 one-hour treatments, which may be offered once or twice daily, usually 5 days per week. The patient is placed on a treatment table where their lower trunk and lower extremities are wrapped in a series of three compressive air cuffs which inflate and deflate in synchronization with the patient's cardiac cycle.

During diastole the three sets of air cuffs are inflated sequentially (distal to proximal) compressing the vascular beds within the muscles of the calves, lower thighs and upper thighs. This action results in an increase in diastolic pressure, generation of retrograde arterial blood flow and an increase in venous return. The cuffs are deflated simultaneously just prior to systole, which produces a rapid drop in vascular impedance, a decrease in ventricular workload and an increase in cardiac output. The augmented diastolic pressure and retrograde aortic flow appear to improve myocardial perfusion, while systolic unloading appears to reduce cardiac workload and oxygen requirements. The increased venous return coupled with enhanced systolic flow appears to increase cardiac output. As a result of this treatment, most patients experience increased time until onset of ischemia, increased exercise tolerance, and a reduction in the number and severity of anginal episodes. Evidence was presented that this effect lasted well beyond the immediate post-treatment phase, with patients symptom-free for several months to two years. This procedure must be done under direct supervision of a physician.

Although ECP devices are cleared by the Food and Drug Administration (FDA) for use in treating a variety of cardiac conditions, including stable or unstable angina pectoris, acute myocardial infarction and cardiogenic shock, the use of this device to treat cardiac conditions other than stable angina pectoris is not covered, since only that use has developed sufficient evidence to demonstrate its medical effectiveness. Non-coverage of hydraulic versions of these types of devices remains in force.

COVERAGE

Benefits may vary between groups/contracts. Please refer to the appropriate Evidence of Coverage or Subscriber Agreement for the applicable "Services Not Medically Necessary" benefits/coverage.

CODING

The following code is medically necessary for BlueCHiP for Medicare with preauthorization when criteria are met **and not medically necessary for Commercial products:**

G0166

RELATED POLICIES

Preauthorization via Web-Based Tool for Procedures

PUBLISHED

Provider Update	Jan 2015
Provider Update	Nov 2013
Provider Update	Feb 2011
Provider Update	Jun 2010
Provider Update	Nov 2008
Policy Update	Jun 2007

REFERENCES

1. Centers for Medicare and Medicaid Services (CMS). National Coverage Determination for external counterpulsation (ECP) thereapy fo severe angina (20.20): http://www.cms.gov/medicare-coverage-database/details/ncd-details.aspx?NCDId=97&ncdver=2&bc=AgAAgAAAAAAAAA%3d%3d&

2. Fihn SD, Gardin JM, Abrams J et al. 2012 ACCF/AHA/ACP/AATS/PCNA/SCAI/STS Guideline for the diagnosis and management of patients with stable ischemic heart disease: a report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines, and the American College of Physicians, American Association for Thoracic Surgery, Preventive Cardiovascular Nurses Association, Society for Cardiovascular Angiography and Interventions, and Society of Thoracic Surgeons. J Am Coll Cardiol 2012; 60(24):e44-e164.

3. Holubkov R, Kennard ED, Foris JM et al. Comparison of patients undergoing enhanced external counterpulsation and percutaneous coronary intervention for stable angina pectoris. Am J Cardiol 2002; 89(10):1182-6.

4. Shechter M, Matetzky S, Feinberg MS et al. External counterpulsation therapy improves endothelial function in patients with refractory angina pectoris. J Am Coll Cardiol 2003; 42(12):2090-5.

5. Bondesson SM, Edvinsson ML, Pettersson T et al. Reduced peripheral vascular reactivity in refractory angina pectoris: Effect of enhanced external counterpulsation. J Geriatr Cardiol 2011; 8(4):215-23.

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